17. (Amended) The insert of claim 14, wherein the second guide engaging surface of said bi-metallic block includes means for connecting said bi-metallic block to a base plate of the saw blade guide.

20. (Amended) The insert of claim 17, wherein said bi-metallic block includes one or more threaded openings for receiving one or more corresponding threaded fasteners extending from a bottom surface of said base plate.

REMARKS

Claims 1 through 20 are pending in the application. Claims 2-6 and 13 have been withdrawn from consideration as drawn to a non-elected invention. Claims 14, 17 & 20 have been amended and claims 18 & 19 have been cancelled.

The following issues are outstanding in the office action dated July 9, 2002:

- The restriction requirement has been deemed proper and has been made final.
- Claims 14 -20 have been rejected under 35 U.S.C. Section 112 (2) as being indefinite.
- Claims 1 & 10 have been rejected under 35 U.S.C. Section 102 (e) as being clearly anticipated by Morgan (U.S. Patent No. 6,202,528).
- Claims 14-20 have been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Edmisson (U.S. Patent No. 4,625,810).
- Claims 14-20 have been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Takahashi et al (U.S. Patent No. 4,632,074).
- Claims 14-20 have been rejected under 35 U.S.C. Section 102 (b) as being

anticipated by Krebsbach (U.S. Patent No. 5,993,915).

- Claims 7-9, 11 & 12 have been rejected under 35 U.S.C. Section 103 (a) as being unpatentable over Morgan in view of Robinson (U.S. Patent No 3,104,575).

Applicant hereby traverses the outstanding rejections and requests reconsideration and withdrawal thereof in light of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. SECTION 112 (2)

Claims 14-20 have been rejected under 35 U.S.C. Section 112 (2), as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Claims 18 & 19 have been cancelled and therefore the rejection with regard to those claims is now moot and should be withdrawn.

The rejection of claim 14 was based upon confusion emanating from recitation of the metallic insert comprising the guide block. In the specification, the metallic insert is described as part of the guide block. Accordingly, applicant has amended claim 14 deleting the term "guide" to clearly indicate that the insert comprises a bi-metallic block which is distinct from the guide block element. Support for this amendment is found on pages 6 & 7 of the specification wherein the blade guide insert is described as comprising a metallic block of material with the metal of a lower region being harder and more abrasion resistant than the metal of the upper region. It is believed that this amendment cures the defect and withdrawal of this rejection is respectfully requested.

Claims 17 & 20 were further rejected as vague and indefinite as to what structure is being further set forth pertaining to the claimed insert. In response, claim 17 has been amended to

clearly recite an insert "including means for connecting said bi-metallic block to a base plate." Likewise, claim 20 has been amended to claim an insert including "one or more threaded openings for receiving one or more corresponding threaded fasteners." It is believed that these amendments cure the defect cited by the examiner and withdrawal of the rejection is respectfully requested.

REJECTIONS UNDER 35 U.S.C. SECTION 102

Claims 1 & 10 have been rejected under 35 U.S.C. Section 102 (e) as being clearly anticipated by Morgan (U.S. Patent No. 6,202,528). An invention is anticipated if all elements of the claims are described or disclosed in the single prior art reference. Morgan does not anticipate the claimed invention.

Morgan teaches a guide for a continuous, driven bandsaw blade, which guide is characterized by a pair of blade supports provided in spaced apart relationship with respect to each other for receiving the bandsaw blade. A pair of carbide blade guide blocks or disc is secured on a top guide bracket of the guide and on a bottom guide bracket of the guide. In a first preferred embodiment, a pair of carbide top blade guide blocks 20 is typically bolted on the bottom surface of the top guide bracket 4, and a pair of carbide bottom blade guide blocks 21 is typically bolted on the bottom guide bracket 6 beneath the top blade guide block 20 as illustrated in Figure 1.

Each top blade guide block 20 and bottom blade guide block 21 typically has a rectangular configuration and a pair of adjacent guide bolt openings 21a for receiving respective guide block mount bolts 9. A rectangular bolt plate 7, provided with a pair of adjacent bolt

openings is typically fitted on the threaded upper ends of the guide block mount bolts 9 and a nut 10 is threaded on the bolt threads 9a of each guide block mount bolt 9 and tightened against the bolt plate to firmly seat the bolt head 9b of each guide block mount bolt in a corresponding bolt seat 20b counter sunk in each top blade guide block 20. According to this configuration, the guide blocks are mounted on the guide bracket in a fixed position such that the guide block assembly is fixed in its vertical axis with respect to the guide bracket. The guide bracket 4 can be vertically adjusted on the support post 3 by loosening nut 10 on the top bracket mount bolt 5, raising or lowering the top guide bracket 4 on the support post 3 and the bracket mount bolt 5 in the top bracket adjustment slot 3a and re-tightening the nut 10 against the top bracket attachment flange 4a and tightening the bottom bracket bolt 5.

Morgan also teaches a second embodiment of his invention shown in figures 9-11 wherein a top blade guide disc 22 is attached by a braze 24 to each of the top guide blade mount bolts 9 and bottom blade guide disc 23 are likewise secured by a braze 24 to each of the bottom guide block mount bolts 9 for guiding the bandsaw blade in the same manner as the top blade guide blocks 20 and bottom blade guide blocks 21 shown in the first embodiment.

Morgan does not teach a guide for stabilizing a saw blade including a securing nut rotatable with respect to the threaded shaft "such that a surface of the securing nut engages the second surface of said guide block upon rotation into engagement therewith thereby rendering the threaded shaft non-rotatable in relation to the guide block" as set forth in independent Claim 1. The present invention teaches a guide block 13 which includes a base plate 14 and an insert 24. An opening 15 in the base plate 14 allows a threaded shaft 16 to be rotatably received therein. A securing nut 30 is provided to fixedly secure the guide block 13 in non-rotatable engagement

with the shaft 16. In operation, the guide block is rotatable in relation to the shaft in order to position the rectangular guide block along the axis of the blade. Once the guide block is properly positioned, the securing nut 30 is tightened against the upper surface of the guide block thereby preventing rotation of the guide block in relation to the shaft. The primary advantage of the present invention over devices such as those taught by Morgan is that a rectangular guide block can be used in applications having a single rotatable shaft whereas in prior art applications only a cylindrical block or disc could be used in such single shaft applications. The shortcoming of use of a cylindrical disc shaped insert is that the disc can be no larger in diameter than approximately 75% of the width of the blade (the total width of the blade minus the area occupied by the teeth and gullet). This is true because, the teeth are "set" (bent at an angle of 3 to 8 degrees away from the plane of the blade and alternately up and down directions). The function of the "set" is to allow the cutting teeth of the blade to engage the object being cut to affect the cut and to carry the kerf away as the blade passes through the object. If the disc were any larger in diameter, the carbide disc would engage the blade teeth and damage the teeth, the disc, the bolt, or all three. Neither the first nor second embodiment of Morgan discloses a guide block which is rotatable with respect to the threaded shaft until a securing nut is engaged with an upper surface of the guide block to prevent rotation thereof.

Independent Claim 10 recites "means for selectively non-rotatably engaging the base plate and threaded shaft." As discussed above, neither the first nor second embodiment of Morgan discloses any such means for rendering the base plate which is normally rotatably connected to the shaft, non-rotatable with respect to the shaft.

For the foregoing reasons, the rejection of Claims 1 & 10 as being clearly anticipated by

Morgan is improper and withdrawal of this rejection is respectfully requested.

Claims 14-20 have been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Edmisson (U.S. Patent No. 4,625,810). An invention is anticipated if all of the elements of the claims are described or disclosed in the prior art reference. Edmison does not anticipate the invention set forth in claims 14-20.

Edmison teaches a tool for tilling the soil including an elongated earth parting blade or shank 10 having an upper end and a pointed lower end 18. Attached to the pointed lower end 18 of the shank is a wear resistant hard metal insert 36. The metal insert is a separate piece of material and is either brazed, soldered or welded to the shank of the tilling tool. The abrasive environment is sand, soil and rock. When a tillage tool is pulled through the earth by a tractor at 3 to 5 mph, the tillage tool travels maximally at a rate of 440 feet per minute. Such an environment does not compare to a hardened steel saw blade traveling at 6000 to 7000 feet per minute in constant contact with a saw guide insert which generates temperatures in excess of 400 degrees Fahrenheit and metal to metal abrasion.

Edmisson does not teach a "metallic insert for a saw blade guide" as specified in claims 14-20 but to the contrary teaches a tillage tool. Moreover, Edmison does not teach a metallic insert comprising a bi-metallic block of material having one portion thereof harder than another portion thereof. To the contrary, Edmisson teaches a hard metal insert 18 of uniform hardness throughout its cross section which is inserted on the end of a tilling tool. As such, the 102 rejection of claims 14-20 based on Edmisson is improper and should be withdrawn.

Claims 14-20 have further been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Takahashi et al (U.S. Patent No. 4, 632,074). An invention is only anticipated if

all of the elements of the claims are described or disclosed in the prior art reference. Takahashi does not anticipate the claimed invention.

Takahashi teaches a wear resistant component of a internal combustion engine such as a rocker arm, tappet, cam valve or valve seat. In such an application, the wear surface is constantly bathed with petroleum based oil which effectively reduces abrasion and reduces heat generated by friction. A saw blade, on the other hand, especially in the wood cutting industry, is almost never lubricated with petroleum based oils because oils are absorbed by the wood and the wood is therefore unusable. If a saw blade is lubricated, it is done with a water based solution usually containing 95% water and a 5% dishwashing detergent or some water soluble vegetable oil. Thus, the environment within which the device of Takahashi is utilized is not comparable to and has no relevance to the present invention. Moreover, Takahashi does not disclose a metallic insert for a saw blade guide as set forth in claims 14-20, nor does he disclose a bi-metallic block wherein the material thereof "proximal to a first blade engaging service thereof is harder than the metallic material proximal to a second guide engaging surface." As such, the Section 102 rejection of claims 14-20 based on Takahashi is improper and should be withdrawn.

Claims 14-20 have also been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Krebsbach (U.S. Patent No. 5, 993, 915). An invention is only anticipated if all elements of the claimed invention are described or disclosed in the reference. Krebsbach does not anticipate the claimed invention.

Krebsbach teaches a method of fusing a thermal spray coating to a base material employing infrared heating. Rather than teaching a bi-metallic block material set forth in claims 14-20, Krebsbach merely discloses a coating which is applied to a base material. Furthermore,

Krebsbach refers to use of austenitic chromium carbide which, by definition, precludes changing the metallurgical structure by thermal treatment as is necessary to form the bi-metallic block of the insert set forth in claims 14-20. Further, Krebsbach does not disclose a metallic insert for a saw blade guide as set forth in claims 14-20. Accordingly, the Section 102 (b) rejection of claims 14-20 based on Krebsbach is improper and should be withdrawn.

REJECTION UNDER 35 U.S.C. SECTION 103

Claims 7-9, 11 & 12 have been rejected under 35 U.S.C. Section 103 (A) as being unpatentable over Morgan in view of Robinson (U.S. Patent No. 3,104,575). A device is unpatentable under Section 103 only if would have been obvious to one of ordinary skill in the art at the time of the invention to modify the primary reference in view of the teachings of the secondary reference. Claims 7-9, 11 & 12 are not obvious in view of the cited references.

As discussed above, the Morgan reference does not disclose all of the limitations set forth in independent claims 1and 10. The combination of Robinson with Morgan does nothing to cure the deficiencies of Morgan with respect to independent claim 1 from which claims 7-9 depend nor does it do anything to cure the deficiencies of independent claim 10 from which claims 11 & 12 depend. Namely, Robinson does not disclose or suggest a guide for stabilizing a saw blade including a securing nut which engages a second surface of the guide block upon rotation into engagement therewith, thereby rendering the threaded shaft non-rotatable in relation to the guide block. Accordingly, the 103 rejection of claims 7-9 and 11 & 12 is improper and should be withdrawn.

Further, Robinson does not disclose or suggest a guide block of bi-metallic material as set

forth in claims 7-9 and 11& 12. Robinson merely discloses that the wear components can be made of hardened steel and only suggests that the wear components of that guide be formed of a single material. Robinson only suggests the use of an alternative material and does not suggest in any way formation of a guide block comprising more than one metallic material. Accordingly, the 103 rejection of claims 7-9, 11 & 12 is improper for these additional reasons and withdrawal thereof is respectfully requested.

The examiner has further taken official notice that chromium carbide including austenitic chromium carbide is old and well known in the art and has well known benefits including resistence to wear. Accordingly, the examiner has concluded that it would have been obvious to one of ordinary skill in the art to make the harden steel of chromium carbide including austenitic chromium carbide for the well known benefits including those described above. Applicant contends that in the present application, it would not have been obvious to one of ordinary skill in the art to make the saw guide inserts of chromium carbide as alleged by the examiner.

The generic term "chromium-carbide" refers to several different classes of alloys designed to survive in varying abrasive environments. Within each Class, there are application specific chemical compositions that are more or less metallurgically suitable for these abrasive environments. The range of chemical elements used in such alloys follows:

PERCENTAGE RANGES

ELEMENT	CLASS I	CLASS II	CLASS III
Carbon	2.5-7.0	2.5-12.0	2.5-12.0
Manganese	.60-5.0	.60-5.0	.60*5.0
Silicon	.25-2.5	.25-2.5	.25-2.5
Chromium	25.0-40.0	18.0-35.0	25.0-40.0
Molybdenum	-	.80-3.5	.80-3.5
Vanadium	-	.25-1.5	1.0-3.0
Boron	-	.005-2.0	.005-.75
Niobium	-	-	5.0-10.0
Tungsten	-	.25-.75	1.0-3.5

For reasons of not wanting to disclose "trade secrets" this application refers only to the generic term " bi-metallic chromium-carbide". Applicant has conducted extensive research on numerous materials attempting to develop a superior abrasion resistant material for saw guide inserts. The range of materials includes various steels: carbon, alloy, stainless tool steels, high speed tool steels, Nickel and Cobalt based high temperature alloys and cast irons and alloys of cast iron. Applicant has researched and used Copper based alloys including aluminum bronze (Belfiglio P.N. 6,412,380), Plastics, Phenolics and Tungsten Carbide. Tests on various grades of steel, chromium-carbide and Tungsten Carbide were conducted using the test method described in ASTM G65-85, Schedule A.

This research led to development of a specific chemical composition of chromium-carbide found among one of the three classes listed above that has never been used, prior to my research, for saw guide inserts. To applicant's knowledge he is the only one using chromium-carbide for saw guide inserts. Hence, it is <u>not</u> "obvious to one having ordinary skill in the art to make the hardened steel of chromium-carbide, including austenitic chromium-carbide for the well known benefits including those described above."

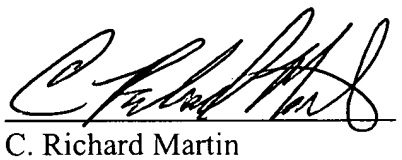
SUMMARY

Applicant submits that this application is in condition for allowance and early notice of same is earnestly solicited.

Should the Examiner have any questions, comments or suggestions, he is invited to contact applicant's representative at the telephone number indicated below.

Respectfully submitted,

Date: November 11, 2002

By: 

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 14, 17, 18 and 20 have been amended as follows:

14. A metallic insert for a saw blade guide for stabilizing a saw blade, said insert comprising a bi-metallic ~~guide~~ block wherein the metallic material of said bi-metallic ~~guide~~ block proximal to a first blade engaging surface thereof is harder than the metallic material proximal to a second guide engaging surface.

17. The insert of claim 14, wherein the second guide engaging surface of said bi-metallic ~~guide~~ block includes means for connecting said bi-metallic block ~~is connected~~ to a base plate of the saw blade guide ~~by one or more fasteners~~.

20. The insert of claim ~~19~~ 17, wherein ~~said one or more fasteners are threaded fasteners and~~ said bi-metallic ~~guide~~ block includes one or more ~~corresponding~~ threaded ~~opening~~ openings for receiving ~~said~~ one or more corresponding threaded fasteners extending from a bottom surface of said base plate.